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ABSTRACT

This study examined the most frequent communicative and linguistic errors made by 24 intermediate ESL students, and determined the effect of direct teacher correction upon these students' writing proficiency. Students were identified as having high or low communicative proficiency and were randomly assigned to one of two error correction treatments based on Burt and Kiparsky's global/local error distinction: correction of global errors only, or correction of global and local errors. Once a week for six consecutive weeks students wrote picture story descriptions in English and had their errors corrected according to assigned treatment. It was found that most communicative ("global") errors resulted from inadequate lexical knowledge, misuse of prepositions and pronouns, and seriously misspelled words. Most linguistic ("local") errors were caused by inappropriate lexical choice, misuse and omission of prepositions, misspelled words, lack of subject-verb agreement, and faulty word order. An analysis of variance revealed no significant differences in students' writing proficiency attributable to error correction treatment or to grouping according to communicative ability. (Author)

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Error Analysis and Selective Correction in the Adult ESL Classroom: An Experiment

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In foreign language education there is a great need for empirical research to examine the communicative effect of errors made by second language learners. There is also a need to determine experimentally how different error correction strategies affect students' developing proficiency in the foreign language. The findings of such empirical research could provide language teachers with useful information for helping students to express their ideas and feelings with greater substance and accuracy.

Recently, Kellerman (1974) recognized that all second language errors should not be assigned an equal status within any given learner's grammar. This statement is especially true when considering which student errors to correct and how to correct them. Many foreign language educators agree that correcting errors that seriously impair the communication of a message should receive priority over those errors that cause a message to appear awkward, yet understandable (Robinson 1971, George 1972, Olsson 1972, Hanzeli 1975, Johansson 1975, Powell 1975, and Valdman 1975). Moreover, Burt (1975) proposes that selective

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approaches to error correction may be cognitively and affectively more effective than an "all-out" correction method, especially if the communicative effect of errors forms the basis of selective correction.

Objectives

This study was conducted to examine two areas of error analysis that directly relate to compositions written by adult learners of English as a second language. Its goals were 1) to determine the most frequent communicative and linguistic errors in these students' compositions and 2) to examine how two types of direct teacher correction would affect the students' writing proficiency.

Classification of Written Errors

Burt and Kiparsky's (1972) global/local error distinction served as the theoretical base for developing a taxonomy of student written errors. In this investigation a global error is a communicative error that causes a native speaker of English either to misinterpret a written message or to consider the message incomprehensible within the total context of the error. A local error, on the other hand, is a linguistic error that makes a sentence appear ungrammatical or unidiomatic but, nevertheless, causes a native speaker of English little or no difficulty in understanding the intended meaning of a sentence, given its contextual framework. (Hendrickson)

Global and local errors were classified into four subcategories based on the misuse or omission of standard English lexicon, morphology, syntax, and orthography. The lexical subcategory included most misused or omitted nouns (including compound nouns), verbs, adjectives and adverbs.

The morphological subcategory referred to the misuse or omission of any required bound morpheme (e.g., ed in played vs. play; un in uncommon vs. common). The syntactic subcategory comprised misused or omitted determiners, modals, qualifiers, prepositions, conjunctions, subordinators, sentence connectors, question words, and certain otherwise uncategorized syntactic classes (e.g., there is, it is). The orthographic subcategory consisted of the addition, omission or rearrangement of one or more letters in any lexical, morphological or syntactic form or structure. Thus, students' written errors were classified into eight general categories as shown in the following chart:

	Global	Local
Lexical		
Morphological		
Syntactic		
Orthographic		

So that students' global and local errors could be converted into statistically manipulable data, a global and a local error ratio were calculated for each student. A global error ratio consisted of dividing the total number of global errors on a composition by the total number of words written. The global error ratio was taken to measure a student's communicative proficiency, i.e., as a student's global error ratio decreased, his communicative proficiency increased. Similarly, dividing the total number of local errors by the total number of words on a composition yielded a local error ratio. A student's linguistic proficiency was thus shown by his local error ratio, i.e., as his local error ratio

decreased, his linguistic proficiency increased.

Subjects

Twenty-four foreign-born adults enrolled in two sections of a non-credit ESL course sponsered by the Division of Continuing Education of The Ohio State University. These students formed a very heterogeneous group in terms of age (18-45 years old), educational background (completion of middle school to postdoctoral studies), English proficiency (raw scores on Form A of the Michigan Test of English Language Proficiency ranged from 29 to 93, with an average of 46), and native language (Arabic, Bengali, Hungarian, Japanese, Korean, Persian, Portuguese, Russian, Spanish, Thai, Turkish, and Vietnamese). At no time prior to or during the English course were students informed that an experiment was in progress.

Procedure

When class enrollment had reasonably stabilized by the second week of class, two pretests were administered. One test determined students' proficiency in English grammar, vocabulary, and reading comprehension as measured by the Michigan Test. A second test assessed communicative and linguistic proficiency in written English by determining students' global and local error ratios on compositions elicited by three picture stories adapted from the Picture Composition Book by Hill (1960). Students were not permitted to use dictionaries, grammar books or other such external aids, and they were not permitted to speak with one another while writing their compositions. On the basis of the latter test, students were identified as having high communicative

proficiency (i.e., low global error ratio) or low communicative proficiency (i.e., high global error ratio). The median global error ratio determined the cutoff point between high and low communicative groupings. Students from both groups were then randomly assigned to one of two treatments: correction of written global errors only (A_1) or correction of written global and local errors (A_2).

To illustrate how each of these two correction methods was undertaken, two facsimiles of an actual student's composition are presented below. In the first facsimile, the composition has been corrected using Treatment A_1, while in the second, Treatment A_2 has been used.

Illustration of Treatment A_1: Correction of Global Errors Only

In the sommer Mr. Smith and her (his) wife leave the camping (camp). They fishing in (on) the lake. She lost her watch in the lake. She is sick (upset). Mr. Smith fishing one big fish. They walking at home (to camp). She craing. He said No problem. I buy new watch.

In the home (camp) she cooking the big fish. She cuting the fish. In the fish is her watch. Mr. Smith and her (his) wife are happy because she has her watch and he not buy new watch.

Illustration of Treatment A_2: Correction of Global and Local Errors

In ~~the~~ summer sommer Mr. Smith and his her wife leave the camp camping. They are ^ fishing on in the lake. She lost her watch in the lake. She is upset sick.

Mr. Smith is catching a ^ fishing one big fish. They are ^ walking to the camp at home. She is crying ^ craing.

He said No problem. I will you a ^ buy ^ new watch.

At camp is In the home she ^ cooking the big fish. She is cutting ^ cuting the fish.

Her watch is in the fish In the fish is her watch. Mr. Smith and his her wife are happy because she has her watch and he did have to a ^ not ^ buy ^ new watch.

Beginning in the third week of the course and extending over the following six consecutive weeks, all students were given the opportunity in class to describe 18 different picture stories adapted from the Hill book. At no time were students permitted to use any external aids while writing these compositions. This researcher corrected each of these picture story compositions according to the particular treatment (A_1 or A_2) to which individual students had been assigned. At the next class meeting each student studied his corrected composition and its corresponding picture sequence alone in separate learning carrels. As each student completed this task, his corrected composition and picture sequence were collected and he was given another picture story to describe in written English.

In the ninth week of the course students were administered as a posttest the two measures that had been used for the pretests. The Michigan posttest was used to determine students' general progress in the English course over a six-week period. The composition posttest was used to investigate whether the error correction treatment had any statistically significant affect upon students' communicative and linguistic proficiency in written English during the same period.

A 2 X 2 factorial Treatment-by-Blocks design was used to test the main and interaction effects of two independent variables: assignment to Treatment A_1 or A_2 and grouping according to high or low communicative proficiency. The two dependent variables were global error ratio and local error ratio, as measured on the composition posttest. An analysis of variance was computed to test for differences of statistical significance at the .05 level.

Results

Frequency of Communicative and Linguistic Errors

Of the nearly 10,000 errors made by students on 552 compositions (including composition pre- and posttests and all in-class compositions), the most frequent are discussed below with respect to the eight error categories outlined above.

Global lexical errors resulted because students lacked sufficient knowledge of the nouns, verbs, adjectives, and adverbs they needed to describe the picture stories adequately. Students often indicated their awareness of their lexical deficiencies by replacing the needed

elements with a line, ellipsis, question mark or an empty space. Occasionally a student omitted a lexical item altogether, either accidentally or intentionally (e.g., "They think that have to [go] up to in there"). Váradi (1973) identifies this communication strategy as **message abandonment.**[2] Other students risked making global lexical errors by substituting completely inappropriate words. For example, when faced with the necessity of conveying the meaning for the noun "fence," many students used one of three communication strategies: message adjustment in the form of generalizations (e.g., "leap," "door," "walk," "gate"); approximation (e.g., "wall," "hedge," "railing"); and word coinage (e.g., "penetre"). (A Vietnamese student who had studied French made the word coinage error, which may have resulted from combining the notion of "getting into" a fenced yard with the French verb pénétrer.) Sometimes students produced global lexical errors simply by using an item that, though semantically related to the needed word, changed a sentence's meaning altogether (e.g., "cattle" for "sheep") or made no sense at all in the particular context (e.g., "hours" for "wristwatch").

Global morphological errors accounted for the least number of global errors. They occurred most frequently when Verb + ing was substituted for Verb + ed (e.g., "The girl is surprising" instead of "The girl is surprised"). Occasionally when a picture story portrayed only one person or object, a student consistently referred to the plural form of the noun without indicating singularity in the context of the composition:

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[2]For several informative discussions on error avoidance see Kellerman (1974), Rojas (1971), and Schachter (1974).

"They go out and bring something to make the holds" (cf. "hole"). On several occasions this phenomenon was reversed: "The farmer took the animal to the barn" (cf. "animals").

Global syntactic errors occurred most frequently when prepositions and pronouns were misused or omitted. Misused prepositions often made meaning ambiguous: "They worked and at last they found their sheeps without frozen" (cf. "were not"). Omitted prepositions also confused meaning: "They are going a brizde" instead of "They are going on a brizde." The misuse of pronouns made several interpretations of meaning possible, especially when subject or possessive pronouns were used inappropriately: "When the woman watch this he is scare and cried" (cf. "she"); "The wife of the family man want some ornaments from his husband" (cf. "her"). Sometimes an omitted pronoun caused considerable ambiguity of a message: "Her husband followed her carring the fish which was hunting for their eating" instead of "Her husband followed her carring the fish which he was hunting for their eating."

Global orthographic errors most frequently occurred with lexical items as illustrated by the following sentence: "The wife coke the fish but in the fihs have the washes." What the student actually meant to write was: "The wife cut the fish but in the fihs have the watches." (A global morphological error was also tallied because the picture story clearly showed that the fish contained a single watch). It would appear that among the primary causes of seriously misspelled words were inadequate knowledge of correct sound-symbol correspondence in English and interference from native language phonology.

Local lexical errors occurred in large numbers on all student's compositions. The following examples illustrate such faulty lexical choices:

"He finded one bird-home and her eggs." ("bird's nest")

"Two boys are sliccing tree know at night." ("sawing down")

"The small boat runs fast to the beach." ("moves")

"Before the sleep he turn-off the curtains on the window." ("close")

Local morphological errors appeared in the compositions of all students in varying frequencies. However, most of these error occurred in two specific areas:

a) Lack of subject-verb agreement. This accounted for a very large portion of the local morphological errors. For example, "The little brother look at his sisters who play badminton" (cf. "looks").

b) Errors resulting from inappropriate past tense forms. These pervaded the compositions of even the most advanced students in the class:

"They digged around the small tree." ("dug")

"Their mother didn't spanked them." ("spank")

"It's impossible it has grew very rapidly." ("grown")

Local syntactic errors accounted for perhaps one third of all global and local errors. The most frequent problems that students experienced with this error type are as follows:

a) The misuse of prepositions caused a great deal of difficulty for all students, especially the inappropriate use of in/on and

to/at. For example:

"They are enjoying each other at living room." ("in")

"There are also a man who is saying good-bye with his wife." ("to")

"When he rides bicycle's, one car hits to him." ("hits him")

Students also omitted many prepositions in their sentences:

"He is listening the talk of the man." ("listening to")

"They are running at the river that is close the house." ("close to")

"He is second story of building." ("is on")

b) Incorrect word order also caused many problems for students:

"They enjoy highly the cooking." ("highly enjoy")

"I did it well until now without it." ("Until now I...")

"'Well, nothing is forever,' told them their mother."
("their mother told them")

Local orthographic errors accounted for many local errors, especially in the nouns, verbs, adjectives, and adverbs students used in their picture story narrations:

"The plaen went to skiy." ("plane," "sky")

"The boy goes up the three and the girl hepls him." ("tree," "helps")

"You must be carefull, I'm not going to buy onother wacht for you."
("careful," "another," "watch")

Effect of Direct Teacher Correction

An examination of the tables below reveals that neither error correction treatment, regardless of level of communicative proficiency, made any statistically significant differences in students' written proficiency over the six-week treatment period.

TABLE 1

Means and Standard Deviations for the Posttest Global Error Ratio By Error Correction Treatment and Pretest Communicative Proficiency

Error Correction Treatment	Pretest Communicative Proficiency					
	High			Low		
	n	Mean	SD	n	Mean	SD
Global Errors Corrected	7	.022	.014	6	.034	.031
Global and Local Errors Corrected	7	.021	.014	4	.037	.017
Totals	14	.022	.013	10	.035	.025

TABLE 2

Analysis of Variance of the Posttest Global Error Ratio By Error Correction Treatment and Pretest Communicative Proficiency

Source	df	SS	MS	F	p[a]
Error Correction Treatment (A)	1	.000[b]	.000[b]	.005	.99
Pretest Communicative Proficiency (B)	1	.001	.001	2.710	.11
Interaction (A X B)	1	.000[b]	.000[b]	.067	.99
Residual	20	.001	.001		
Total	23	.000[b]			

[a]Probability of rejecting a true null hypothesis
[b]Computer program rounded these values to only three digits

TABLE 3

Means and Standard Deviations for the Posttest Local Error Ratio By Error Correction Treatment and Pretest Communicative Proficiency

Error Correction Treatment	Pretest Communicative Proficiency					
	High			Low		
	n	Mean	SD	n	Mean	SD
Global Errors Corrected	7	.113	.054	6	.166	.060
Global and Local Errors Corrected	7	.112	.055	4	.098	.028
Totals	14	.112	.052	10	.139	.059

TABLE 4

Analysis of Variance of the Posttest Local Error Ratio By Error Correction Treatment and Pretest Communicative Proficiency

Source	df	SS	MS	F	p[a]
Error Correction Treatment (A)	1	.005	.005	1.700	.21
Pretest Communicative Proficiency (B)	1	.003	.003	1.190	.29
Interaction (A X B)	1	.006	.006	2.277	.14
Residual	20	.056	.003		
Total	23	.071			

[a]Probability of rejecting a true null hypothesis

As with many empirical studies dealing with student behavior, it was difficult to completely isolate every specific variable relating to error correction strategies of written compositions. Therefore, several interpretations of the results are possible.

One interpretation is that supplying the correct form of an error was an overly direct error correction strategy for most of the intermediate students. Corder (1967), Corbet (1974), and Valdman (1975) propose that supplying the correct form might actually prevent the learner from testing alternate hypotheses that could lead to an acceptable lexical item or grammatical structure in the target language. This interpretation of the results of the study provides some evidence

to support that position. Perhaps a discovery approach, combining teacher guidance with self or peer correction would be a more effective error correction strategy.[3]

Another interpretation could be that students were unable to remember and profit from the many corrections they received over the six weeks of treatment. Indeed, many students asked to take home their corrected compositions in order to compare the errors they made on previous compositions. (Obviously, during the correction period, these requests had to be diplomatically denied to avoid possible experimental bias if students had discovered that their errors were treated differently.[4])

A third interpretation is that the taxonomy of global and local errors was not refined enough for the correction of written errors. Put differently, students might have been able to improve their communicative and linguistic proficiency much more if particular errors had been corrected instead of merely global or global and local errors. For example, those students who had low communicative proficiency made very many errors in subject-verb agreement on their compositions. An examination of Table 3 indicates that the students in this low group whose global and local errors were corrected, reduced their average local error ratio (.098) far greater than students in the same communicative grouping who received correction of their global errors only (.166). The substantial difference between these two means may

[3]In a recent study, Witbeck (1976) found that peer correction procedures result in increasingly more accurate and responsible written work for most students.

[4]At the completion of the English course, students received xeroxed copies of their compositions.

be attributable to the internalization of rules for subject-verb agreement among Treatment A_2 students as opposed to students who received Treatment A_1.

A final explanation to account for the statistically insignificant effect of the independent variables is that the sample population of the study was too small. Tables 1 and 3 indicate that the largest cell size for any one group was 7. Cell sizes of 20-30 each would greatly increase the statistical reliability of differences among treatment groups as would the use of a control group consisting of students who write compositions without receiving correction of their errors (at least during the experiment).

An Additional Finding

An unexpected finding in this study was the substantial increase (30%) in the number of words students wrote on the composition posttest (10,366) compared to the number of words they wrote on the composition pretest (7,966). It seems reasonable to suggest that the more confident the students became in expressing themselves in written English, the more words they produced. Brière (1966) also found that students showed a spectacular increase (161%) in the total word output on the composition posttests compared to the number of words they wrote on their composition pretests.

Conclusions

The purpose of this study was to examine which errors affect a students' communicative and linguistic proficiency in written English and to determine experimentally the effectiveness of correcting students' written compositions in different ways. The findings of the study provide some evidence that the communicative proficiency in the written work of intermediate students of ESL depends rather heavily upon an adequate knowledge of vocabulary[5] and upon the proper use of prepositions and pronouns. The results further indicate that linguistic proficiency depends on knowledge of the subtle connotations of English lexicon, on skill in using prepositions precisely, on making subjects and verbs agree, on using the simple past and past perfect tenses correctly, and on writing sentences that conform to the demands of English word order. The selective approach to error correction used in this investigation did not improve students' communicative or linguistic proficiency in written English any more substantially than did correcting all composition errors.

A great deal more empirical research is needed to determine the communicative effect of students' written errors and to find more effective ways to correct such errors. For the present, the development of instructional techniques and materials for facilitating communicative and linguistic proficiency in the ESL classroom largely depends upon the professional responsibility and personal integrity

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[5]Richards (1976) recommends that a component of massive vocabulary expansion should be a major feature of a second language program for intermediate and advanced students.

of the teacher. He or she must provide students with effective and creative activities and exercises to help learners become more self-sufficient and self-confident when writing in English.

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